

VIA UPS

Mr. David Keith  
Project Coordinator  
Anchor QEA, LLC  
614 Magnolia Avenue  
Ocean Springs, MS 39654

RE: Draft Toxicological and Epidemiological Studies Memorandum  
San Jacinto River Waste Pits Superfund Site, Harris County, Texas  
Unilateral Administrative Order, CERCLA Docket No. 06-03-10

Dear Mr. Keith:

The Environmental Protection Agency (EPA) and other agencies have performed reviews of the above referenced document dated January 2012. The enclosed comments shall be incorporated in the Final Toxicological and Epidemiological Studies Memorandum and copies provided for review and approval in accordance with the approved schedule.

If you have any questions, please contact me at (214) 665-8318, or send an e-mail message to [miller.garyg@epa.gov](mailto:miller.garyg@epa.gov).

Sincerely yours,

Gary Miller  
Remediation Project Manager

Enclosure

cc: Luda Voskov (TCEQ)  
Bob Allen (Harris County)  
Nicole Hausler (Port of Houston)  
Jessica White (NOAA)

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## Comments

### Draft Toxicological and Epidemiological Studies Memorandum dated January 2012

1. **(Section 2.1, p. 2-1):** This section identifies metals and inorganics as potential concerns for human health (also Table 1 of this document). However, this list is not completely reflective of the list identified in the Preliminary Site Characterization Report (Table 1-2). The text shall provide the rationale for not including the previously identified constituents of concern.
2. **(Section 2.2, p. 2-2, Figure 1, and Figure 2):** This section discusses (and the Figures illustrate) exposure scenarios and whether or not they are considered potentially complete. The Texas Risk Reduction Program (TRRP) does not distinguish between minor and significant pathways. Further, the four exposure scenarios, including both fishers, recreational visitor, and trespasser, have been deemed complete/minor (therefore only qualitatively assessed). Though it is probably true that wastes are unlikely to move appreciably from sediment to water, this pathway is important enough and visible enough to warrant quantitative evaluation. This is one of the pathways, regardless of how minor, the public will have great interest in. Regarding porewater, organisms except invertebrates have been deemed complete/minor, however, if they disturb sediment, then they could be exposed to quite a bit of porewater. To illustrate this point, consider wading birds that forage by grabbing food items from the sediment. If a pathway is considered to be complete, then it shall be evaluated quantitatively.
3. **(Section 3.3, p. 3-5):** This section presents a hierarchy of toxicological sources considered in the selection of toxicological criteria for this document and states that it is consistent with TCEQ (2009) guidance. However, this hierarchy only lists three tiers and is therefore not consistent with the TCEQ TRRP hierarchy, which is defined in 30 TAC §350.73(a). The text shall be corrected.
4. **(Section 3.3, p. 3-6):** The third bullet states, “if IRIS has no subchronic RfD and the chronic RfD is not based on a subchronic study, then ATSDR’s intermediate MRL was selected as the toxicity criterion assuming that there is adequate scientific support provided.” The text shall “define adequate scientific support”, and what if adequate scientific support is not provided? The text shall elaborate and justify this statement.
5. **(Section 4.1 and all relevant subsections):** As EPA has just released the non-cancer assessment for dioxins/furans, this section and Table 3 shall be updated accordingly. The chronic oral RfD is now 0.7 pg/kg-day. In addition, please be aware that the cancer assessment may be finalized any day now.
6. **(Section 4.1.2, p. 4-7):** This section mentions the EPA reference dose (RfD) for dioxin as proposed. It shall be noted that since the release of this document the EPA RfD for dioxin has been finalized.
7. **(Section 4.1.3.1.3, p. 4-10):** The last sentence of this section states, “No rationale for the preferential selection of the CalEPA value is provided in the documentation on USEPA’s

web site.” The text shall note that the selection is due to the level of peer review as determined by the EPAs Regional Screening Levels Work Group.

8. **(Section 4.1.3.2, p. 4-17):** The RfD of 0.7 pg/kg-day has been adopted by EPA. This section shall be modified accordingly.
9. **(Section 4.2, p. 4-21 and 4-22):** This sentence states, “It is presumed that if USEPA adopts its proposed RfD for TCDD, it would recommend the same approach for evaluating the non-cancer effects of this subset of congeners.” EPA has adopted the RfD for TCDD (0.7 pg/kg-day). The EPA however, has not made any policy statements yet as to this decision’s effect on PCB assessment. This section shall be modified accordingly.
10. **(Section 4.2, p. 4-22):** Though it may be true that treating all congeners in a similar fashion as the 12 dioxin-like compounds (DLC) may overestimate risk, the statement, “Thus, to combine the estimated TEQ risks for the 12 dioxin-like congeners with the estimated risks of the remaining congeners (calculated using USEPA’s toxicological criteria for total PCBs) would effectively double-count the toxic potential of the dioxin-like PCB congeners.”, is speculative and shall be removed or modified to provide scientific justification as to the “double-count” comment. It is not apparent that the scientific community has ascertained the toxic potential of the other 197 congeners combined in relation to the 12 DLCs. It could be more, less, or equal.
11. **(Section 7, p. 7-14):** The TCEQ 2011 citation is not correct. This reference was written by the Toxicology Division, which is located at TCEQ headquarters in Austin. The citation incorrectly gives Channelview, TX as the location. The citation shall give Austin, TX as the location.
12. **(Table 3):** Chromium (VI) and copper have the RfDs listed as 0.0025 and 0.037, respectively. This is not consistent with the text: Section 5.3.2.2 states the chromium (VI) RfD is 0.003, and Section 5.4.2 states the copper RfD is 0.04. The correct RfDs shall be used for calculations (i.e., the RfD stated in the text).
13. **(Table 3):** The chronic oral RfD for dioxins shows 2.3 mg/kg-day, however, the units column shows pg/kg-day. This discrepancy shall be corrected.
14. **(General):** The document recounts the results of various studies and values obtained as background for the USEPA’s final value / categorical determination. However, the intertwining of this information was at times confusing. The final outcome was stated in some instances, without the benefit of restating the value to be used (i.e. “the chronic RfD {for nickel} will be used to evaluate both chronic and subchronic exposures” ) without the benefit of restating that particular RfD. The text shall clearly provide the value to be used.